

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
SOUTHERN REGION
701 LOYOLA AVENUE
P. O. BOX 53326
NEW ORLEANS, LOUISIANA 70153

August 17, 1973

Subject: Screwworm Research

To: T. W. Edminster, Administrator

As you know, the screwworm eradication program conducted by APHIS suffered a very serious setback last year in Texas and has been in difficulty this year in Arizona and New Mexico. During this period the U. S. signed an agreement with Mexico whereby the screwworm eradication program will be extended in Mexico down to the Isthmus of Tehuantepec. And, of course, Congress has increased the USDA/APHIS budget to provide for the extended operational program.

During the past few years we increased support for the screwworm research program by about 25 percent; however, this increase was rather modest considering the increased cost of operations during recent years. Regardless, the increase is not enabling us to keep pace and provide solutions to the problems being encountered by APHIS. Now that the operational program is moving into Mexico, there will undoubtedly be an increasing need for ARS research.

In anticipation of the increased need, our Sub-Tropical Texas Area gave screwworm first priority in their FY75 budget request, a proposed increase of 3 SMY. SR also placed screwworm first in priority in the beef cattle package request. We do not know if this important work became a part of the ARS FY75 budget proposal to the Department. Also, during the recent discussions to develop a \$1.1 million meat animal program for FY74, we gave screwworm a high priority rating. So far as we are able to determine, it was not included in the package finally developed. And yet, if not kept out of the U.S., screwworm will have a decidedly adverse impact on our livestock industry in the Southwest and South.

Even if our FY75 proposed increase is included in the budget, scientists at Mission are beginning to wonder if we can meet the demands

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AUG 30 1973

AREA OFFICE
WESLACO, TEXAS

that APHIS may have for research. The attached statement, "Screw-worm Research", was prepared by those specialists in an effort to delineate the type of research program that will be necessary to provide solutions to the problems that will be encountered in Mexico and some that continue to occur in the U.S.

Since ARS research does support the operational program, we would be interested in learning the type and magnitude of problems that Dr. F. J. Mulhern and his top staff anticipate. We would greatly appreciate it if your office would discuss ARS projections with Dr. Mulhern in order to obtain his and your reactions to our concerns. The ARS Mission scientists are working closely with the APHIS Mission operational people, but we feel sure they would benefit by feedback from the top.

A. W. Cooper

A. W. Cooper
Deputy Administrator

Enclosure

SCREWWORM RESEARCH

The ARS Screwworm Research Laboratory at Mission, Texas, was established in FY 1963 with a budget of \$200,000. Its mission was, and still remains, research in support of the APHIS screwworm eradication program in the Southwest. For FY 1974, the tentative budget is \$256,500 to support 5 SNY. This budget has not permitted ARS research to keep pace with the APHIS screwworm eradication program that ARS is obligated to support. The APHIS screwworm eradication program started in 1963 with an annual budget of \$5 million. In FY 1973, the budget was \$9 million. With the Mexico operation included, the FY 1974 budget is approximately \$16 million. ARS responsibilities and fiscal needs to support the program have increased in the same proportion.

Eradication effort has been experiencing difficulties. Last year, there were 96,625 cases of screwworms identified in Texas on the basis of samples mailed to Mission program staff. There were, undoubtedly, many more unreported cases. This season, preceded by a cold winter, the situation is not so acute in Texas but Arizona and New Mexico are experiencing the worst screwworm year since the program started. Field tests made jointly with APHIS near Tampico and Victoria, Mexico, in the spring of 1973 showed that only 50% of the wild females mated with sterile males--even though trapping studies showed that sterile flies outnumbered wild flies more than 300 to 1. The continued increase of screwworm cases in Texas since the end of winter suggests that the released flies are not fully competitive. We do not know why.

Genetic research. There is a growing literature of insect genetics which reports that insects lose field adaptability through natural selection as they become adapted to laboratory colonization and mass rearing. Quite possibly, a loss of competitiveness among sterile screwworm flies is due to genetic deterioration in the laboratory. The new technique of isozyme analysis makes available biochemical markers to trace genetic changes in laboratory populations. Preliminary research indicates that ARS should initiate studies of biochemical variability in new field collections, and test each generation in the laboratory to assure that those field characteristics are maintained. Such research would require a full-time biochemist and support staff.

Mexico eradication program will add new problems. In November 1974, a new rearing plant is scheduled for completion at Tuxtla, Gutierrez, in the Isthmus of Tehuantepec. This plant is to produce 300 million sterile flies weekly to compete for mates against the wild population of southern Mexico. There is zero research knowledge regarding specifics on genetics, ecology, mating behavior, population density, etc., for this area. ARS has done no research south of the state of Vera Cruz and neither has anyone else. We have very little knowledge of screwworms along

the whole Pacific Coast of Mexico. The difficulties that APHIS has encountered in the screwworm eradication effort in Puerto Rico have highlighted our lack of knowledge about screwworm in tropical areas.

Ecological research. We need many field samples of screwworms from southern Mexico and the Pacific coast for genetic comparison. It is essential that the flies to be sterilized and released in those new areas of Mexico match the heredity of the populations in which they will compete for mates. At the earliest possible date, field samples of new insect stocks should be collected from varied ecological situations. In addition, strains of sterilized flies should be field tested for mating competitiveness in all the varied environments of Mexico. Such research should also involve investigations of any peculiarities of screwworm biology in these new, previously unstudied, environments. These studies would require two bilingual insect ecologists--one for northern and one for southern Mexico.

Research on breeding stocks. The genetic and ecological research mentioned above should tie directly into research to develop new breeding stocks that could be infused into the APHIS operational program whenever needed. Initially, 3 genetically distinct breeding stocks, called production strains, should be developed--each from 20 or more field collected egg masses. Maintenance of genetic purity would require separate rearing facilities. A fourth rearing facility equivalent to those used for the separate strains would be used to develop new colonies and test new procedures. These would be reserve strains, built-up and field tested as candidate replacements for production strains.

Each production strain would be replaced by a newer strain within two years in order to maintain breeding stocks as nearly wild-type as possible. In order to conduct the required research, the production strains would be of such size that they would also provide APHIS with one million eggs per day. APHIS could rear to the adult stage and, by blending the three strains, stock the rearing colony with flies whose offspring would have hybrid vigor. This extremely important activity, directly tying ARS research and APHIS operations, would require one entomologist and support staff for rearing.

The APHIS program would directly and immediately benefit from the genetics studies because the eradication plant would get all of its breeding flies as pedigreed eggs each day. As additional benefits, success will guide other ARS and SAES insect colonizers working with other forms of biological control, such as parasites and predators. Also, fundamental science would benefit since university scientists, not concerned with practical insect control but intellectually curious about evolution, speciation, genetics of behavior, etc., would follow ARS work closely. In the past following ARS research they have expressed special excitement about genetic changes in laboratory populations.

Physiological research. We do not yet have a bait better than decomposing liver for APHIS to use to keep track of fly populations. Liver does not attract male screwworms. While it attracts female screwworm flies, it also attracts huge numbers of ordinary blow flies. This fact alone makes it impractical to monitor eradication progress with fly traps. For efficiency in research, we need a more selective bait. To follow male fly activity, we need a male attractant.

Only one insect physiologist is now on the staff. He is fully occupied with rearing problems and other physiological tests such as flight studies, mating competitiveness, longevity, energy reserves, and fly vigor. Since these studies must be maintained full time, attractants research would benefit from the addition of another physiologist and support staff.

Screwworm problem won't fade away. During the past year, APHIS released 200 million flies per week. And yet, 100 million per week sufficed to eradicate screwworms from the U.S. and protect from reinvasion between 1963 and 1966. Even if the redoubled and dedicated effort of APHIS, combined with our limited but intense research effort, should bring about temporary relief, the problem of having to increase the number of flies released to achieve eradication still exists. Indeed, it appears to be increasing. In addition, USDA needs to prepare for all the new problems that are inevitable with the expanded program in Mexico.

Expanded Research for Screwworm

5 SMY at \$65,000 per SMY - - - - - \$325,000

New Positions Needed

2 Entomologists GS-12 (Mexico, field)
1 Entomologist GS-12 (Physiology)
1 Entomologist GS-12 (Laboratory Rearing)
1 Biochemist GS-12 (Isozyme studies)
1 Technician GS-7 (Laboratory Rearing)
3 Technicians GS-5 (Laboratory Rearing)
3 Technicians GS-3 (Laboratory Rearing) ==
3 Technicians GS-1 (Fly Sorting)
1 Laborer WB-2 (Laboratory Janitor)
1 Clerk GS-3 (Office)

*Rearing Building and Equipment - - - - - 108,300

Diet Supplies for New Breeding Colonies - - - - - 65,000

GRAND TOTAL \$498,300

*After construction, these funds will be used for additional fly diet supplies and to support expanded ecological studies in Mexico.

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3 Technicians GS-3 (Laboratory Rearing)
3 Technicians GS-1 (Fly Sorting)
1 Laborer WB-2 (Laboratory Janitor)
1 Clerk GS-3 (Office)

New Building and Equipment for Screwworm Breeding Colonies

80' x 80' building for breeding stocks:

~~(Estimates by Joe Smithy, APHIS force construction)~~

Building Shell - - - - -	\$ 50,000
Electrical, air-conditioning, plumbing - - - - -	<u>25,000</u>
Total - - - - -	\$ 75,000

Equipment:

Colony cages (APHIS specs.)	36 @ \$530 ea.	- - - - -	\$ 19,080
Rearing vats (APHIS specs.)	21 @ \$130 ea.	- - - - -	2,730
Vat racks (APHIS specs.)	7 @ \$150 ea.	- - - - -	1,050
Bacteriological incubators	4 @ \$300 ea.	- - - - -	1,200
Rearing vats (1/4 size)	12 @ \$ 75 ea.	- - - - -	900
Pupa holding trays	48 @ \$ 10 ea.	- - - - -	480
Larva capture pans	56 @ \$ 10 ea.	- - - - -	560
Media mixers	4 @ \$300 ea.	- - - - -	1,200
Refrigerators	4 @ \$250 ea.	- - - - -	<u>1,000</u>
Total - - - - -			\$ 28,200

Equipment for physiology research:

Bioclimatic cabinets	2 @ \$1700 ea.	- - - - -	\$ 3,400
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Miscellaneous rearing equipment:

Small cages	100 @ \$ 10 ea.	- - - - -	\$ 1,000
Larva sifters	4 @ \$ 75 ea.	- - - - -	300
Larva-pupa separators	4 @ \$100 ea.	- - - - -	<u>400</u>
Total - - - - -			\$ 1,700

GRAND TOTAL - - - - - \$108,300

RECEIVED

FILE: SECTION *Research*
SUBJECT *Screwworm*
FOLDER *Expanded Prog.*

SUBTROPICAL TEXAS AREA
P. O. Box 267
Weslaco, Texas 78596

October 1, 1973

Subject: Revised Supplement to Screwworm Research Budget

To: M. L. Cleveland, Acting Assistant Administrator
USDA, Agricultural Research Service
Washington, D. C. 20250

In response to R. J. McCracken's request to reassess the expanded screwworm budget, I talked with Dr. Bushland this morning and we have noted two serious deletions.

Attached is a revised itemized budget which includes an item in the amount of \$65,000 for diet supplies for new breeding colonies, making a new total of \$498,300. Please substitute the first page of the August 17 budget estimate with this revised page.

The item of \$108,300 for the rearing building and equipment will be used, after construction, for additional fly diet supplies and to support the expanded ecological studies at work sites in Mexico.

Edgar A Taylor

E. A. Taylor
Area Director

cc:
A. W. Cooper
L. Henderson

ARS:SR:EATaylor:nc 10/1/73

*Sent via Teletype
to: Mr. L. Cleveland
A. W. Cooper
L. Henderson
10-1-73
LH*

Expanded Research for Screwworm

5 SMY at \$65,000 per SMY - - - - - \$325,000

New Positions Needed

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3 Technicians GS-3 (Laboratory Rearing)-
3 Technicians GS-1 (Fly Sorting)
1 Laborer WB-2 (Laboratory Janitor)
1 Clerk GS-3 (Office)

*Rearing Building and Equipment - - - - - 108,300

Diet Supplies for New Breeding Colonies - - - - - 65,000

GRAND TOTAL

\$498,300

*After construction, these funds will be used for additional fly diet supplies and to support expanded ecological studies in Mexico.

General Remarks on the Survey

The following table gives a summary of the results of the survey, and shows the number of specimens of each species collected, and the number of localities at which they were found.

The specimens were collected during the months of June, July, and August, 1881, and were deposited in the collection of the U.S. National Museum.

1. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
2. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
3. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
4. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
5. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
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7. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
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9. *Amphispiza bilineata* (Aud.) 1 specimen, 1 locality.
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The following table gives a summary of the results of the survey, and shows the number of specimens of each species collected, and the number of localities at which they were found.

Expanded Application Research for Screwworm

5 SMY at \$65,000 per SMY (~~Recurring Funds~~) - - - - - \$325,000

New Positions Needed

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* Rearing Building and Equipment (~~Non-recurring Funds~~) - - - - \$108,300

Diet Supplies for ^{new} Breeding Colonies 65,000

GRAND TOTAL

~~\$433,300~~

498,300

~~APHIS should supply food for larvae and adults and utilities for new building.~~

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* Funds will be used for additional fly diet supplies
and to support expanded ecological studies
in Mexico

Received
27 Sep 73
1315

File

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

SOUTHERN REGION

SUBTROPICAL TEXAS AREA

P. O. Box 267

Weslaco, Texas 78596

FILE: SECTION Research
SUBJECT Screwworm
FOLDER Expansion Prog

September 27, 1973

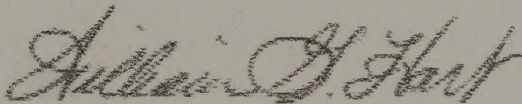
Subject: Supplement to Screwworm Research Budget

To: Edgar A. Taylor, Area Director

In response to your telephone call of yesterday, I talked with Dr. Bushland and relayed your suggestions on the subject item. The attached summary of additional financial requirements was received from him this morning.

The only comment I have concerning these suggested increases is that it seems to have disproportionate amounts devoted to contract work. More funding for supplies and services seems to be in order, based on the total amount requested.

If we can provide any additional information, please call us.



William G. Hart
Research Leader

SUPPLEMENT TO BUDGET SENT WITH A. W. COOPER'S MEMO OF
AUGUST 17--SUBJECT: SCREWORM RESEARCH

Ecological and Genetic Studies of Screwworms In Mexico

Standard portable fly traps, 300 @ \$16.00	\$4,800	
Pick up trucks equipped for field studies, 2 @ \$4000	8,000	
Hygrothermographs, 4 @ \$300	1,200	\$14,000

Development of Improved Trapping Methods

Synthetic Chemicals to be tested as attractants	3,000	
Stabilizers and extenders for fly baits	3,000	
Experimental traps and metering devices	1,000	
Travel funds for specialists in attractants to come from laboratories at Beltsville, Md., and Gainesville, Fla., to participate in experiments at Mission	3,000	10,000

Tracking of Released Sterile Flies

Research contract with Electrical Engineering Dept., North Dakota State University, to develop portable (50 lbs. total weight) radar units with 200 yard range, and transportable (500lbs. total weight) radars with 3-mile range to track individual insects.

Insects can be marked with transponders for detection while flying. Some exploratory work will be done with diodes to mark insects so they can be detected at rest

20,000

Screwworm Genetics

Expansion of research contract with the Genetics Foundation, University of Texas, to investigate enzyme systems in all the major screwworm populations representing various geographic areas of Mexico and Southwestern US

20,000

TOTAL

\$64,000

R. C. Brubaker

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

SOUTHERN REGION

SUBTROPICAL TEXAS AREA

P. O. Box 267

Weslaco, Texas 78596

September 27, 1973

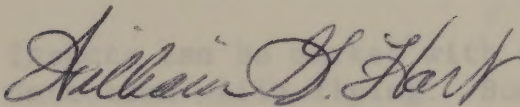
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*Sent this telegraph
to each of 4-21 Center
Washington D.C.
9-27-73
J.G.*

EXHIBIT TO REPORT OF THE U.S. GEOLOGICAL SURVEY
ACQUITTAL OF THE U.S. GEOLOGICAL SURVEY

Estimated and Actual: Summary of Expenditures in 1912

Estimated	Actual
1,000,000	1,000,000
1,000,000	1,000,000
1,000,000	1,000,000

Summary of Expenditures in 1912

Estimated	Actual
1,000,000	1,000,000
1,000,000	1,000,000
1,000,000	1,000,000

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1,000,000	1,000,000
1,000,000	1,000,000

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1,000,000	1,000,000
1,000,000	1,000,000

TOTAL

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Handwritten signature at the bottom right of the page.

SCREWORM RESEARCH

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Rearing Building and Equipment (Non-recurring Funds) - - - - \$108,300

GRAND TOTAL

\$433,300

APHIS should supply food for larvae and adults and utilities for new building.

Revised

New Building and Equipment for Screwworm Breeding Colonies

80' x 80' building for breeding stocks:

(Estimates by Joe Smithey, APHIS force construction)

Building Shell - - - - -	\$ 50,000
Electrical, air-conditioning, plumbing - - - - -	25,000
Total - - - - -	\$ 75,000

Equipment:

Colony cages (APHIS specs.)	36 @ \$530 ea.	- - - - -	\$ 19,080
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Vat racks (APHIS specs.)	7 @ \$150 ea.	- - - - -	1,050
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Equipment for physiology research:

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Miscellaneous rearing equipment:

Small cages	100 @ \$ 10 ea.	- - - - -	\$ 1,000
Larva sifters	4 @ \$ 75 ea.	- - - - -	300
Larva-pupa separators	4 @ \$100 ea.	- - - - -	400
Total - - - - -			\$ 1,700

GRAND TOTAL - - - - - \$108,300

Justification for Establishing an ARS Screwworm Laboratory in Southern Mexico

The screwworm plant in Chiapas, Mexico will begin operations in April 1975 with a scheduled production of 300 million sterile flies per week. It is ARS responsibility to provide APHIS with breeding stocks of known genetic quality and scientifically tested performance. Very little is known about the biology and ecology of the screwworm in the true tropics. It is imperative that basic information about the species as it exists in southern Mexico (the region south of the 20th parallel) be obtained before initiating a sterile male release program the size of the proposed Mexico program. Biological factors such as pathogens, parasites, and predators probably replace climatic factors as the population limiting mechanisms in the tropics, but these are largely unstudied by either ARS or Mexican release agencies. Further, we have limited information regarding the feasibility of releasing current strains of screwworms in the tropics.

The sterile flies to be released in southern Mexico should be from special breeding stocks started from wild strains collected in that region. There are many rearing problems in adapting wild flies to laboratory cultures. Once a strain is in laboratory production, it must be proved effective in the field under tropical conditions against local populations of wild flies.

Very likely two or more new specialized strains will be needed to function in the diverse ecological situations of southern Mexico. To adapt new cultures to laboratory rearing and to build up strains in sufficient numbers for field tests will require at least one year. Before laboratory rearing can begin, laboratory space, similar to the specifications of the attached sketch, will be needed in Mexico.

Development of new breeding stocks in the as yet unstudied environments of southern Mexico will require a minimum of two, preferably bi-lingual, entomologists (ecology). The new field collections will need to be adapted to laboratory rearing and tested for vigor and mating competitiveness in the laboratory. One entomologist (physiologist) will be required to field-test new strains in the southern Mexico release areas.

This research must be done on-site in southern Mexico as large-scale pilot tests in a tropical environment. For APHIS

to go into a mass-production effort without one year of prior research by ARS would risk the waste of millions of dollars of program funds while discovering differences between various strain responses in new ecological situations in southern Mexico.

As a minimum, ARS should conduct a research program in Mexico that would provide additional information along the following lines:

A. Ecology

1. Correlate seasonal fluctuations in screwworm populations with a series of typical habitats.
2. Behavior of released sterile adults. Improved tagging methods.
3. Cooperation with NASA on use of remote sensing to monitor and predict population fluctuations.

B. Genetics

1. Maintenance of genetically vigorous strains of screwworms in colony.
2. Genetics of in-breeding and laboratory adaption; recognition of genetic shift and alterations.

C. Physiology

1. Methods of monitoring adult vigor.
2. Larval and adult nutrition.
3. Attractants.
4. Circadian rhythms in screwworms and their modification.
5. Endocrine systems and their role in colonization and mass release.
6. Use of electrophoretic methods to identify strains and recognize genetic shift.

Mexico Laboratory:

Building - 12,320 sq ft @ \$15 -----	\$ 184,800
Equipment (cages, incubators, refrigerators, etc.)	\$ 20,000
Sub-total -----	\$ 204,800
Vehicles: 3 air-conditioned, 4-wheel drive, pickup trucks -----	\$ 10,000
Materials and supplies -----	\$ 35,200
Grand total -----	\$ 250,000 ^{1/}

1/ Needed on a continuing basis for local support services, equipment, and supplies.

Scientific support can be provided by redirection from the proposed expanded screwworm research program at Mission, Texas. However, ARS will require nine foreign ceiling slots (OPRED slots) for the scientist and support personnel stationed at the southern Mexico laboratory.

The laboratory will not be fully equipped for full-scale operations but this additional equipment and material can be transferred when Mission, Texas laboratory phases out with the Mission APHIS program.

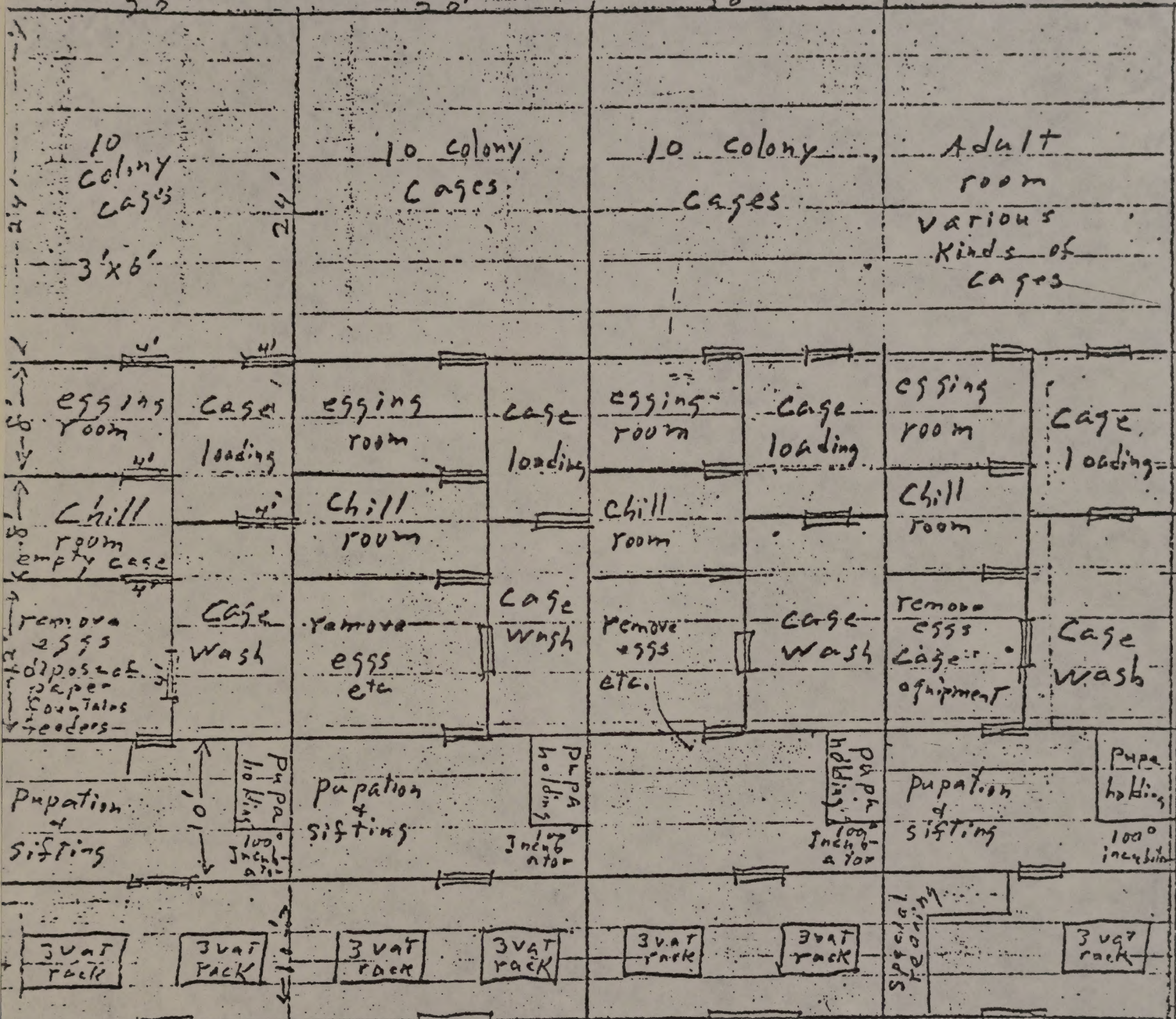
Addition TO rearing building 80' x 88'

A Colony

B Colony

C Colony

New strain
Colonization



Service Area

Media preparation, cleaning & sterilizing

Incineration of flies & paper
Spent media disposal

General Office Area

Shottonville 12/19/73 DCB

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

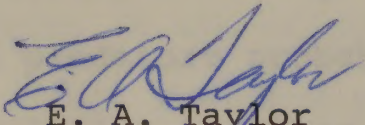
SOUTHERN REGION
SUBTROPICAL TEXAS AREA
P. O. Box 267
Weslaco, Texas 78596

January 15, 1974

Subject: Justification for Screwworm Laboratory
in Southern Mexico

To: H. C. Cox, Associate Deputy Administrator
Southern Region, ARS-USDA
New Orleans, LA

The attached draft is being sent for your review and comments. This matter will be discussed at the Executive Conference on Screwworm Research at Mission on Jan. 22-23, 1974. I would appreciate your comments prior to this time.


E. A. Taylor
Area Director

Attachment

Justification for Establishing an ARS Screwworm Laboratory
IN Southern Mexico

The screwworm plant in Chiapas, Mexico will begin operations in April 1975 with a scheduled production of 300 million sterile flies per week. It is ARS responsibility to provide APHIS with breeding stocks of known genetic quality and scientifically tested performance. Very little is known about the biology and ecology of the screwworm in the true tropics and it would be (foolhardy) to launch a sterile male release program of the size of the proposed Mexico program without acquiring some basic information about the species as it exists in southern Mexico (the region south of the 20th parallel). Biological factors such as pathogens, parasites, and predators probably replace climatic factors as the population limiting mechanisms in the tropics, but these are largely unstudied by either ARS or Mexican research agencies. There is no clear proof that it will be feasible to mass-rear current strains of screwworms for releases in the tropics.

The sterile flies to be released in southern Mexico should be from special breeding stocks started from wild strains collected in that region. There are many rearing problems in adapting wild flies to laboratory cultures. Once a strain is in laboratory production, it must be proved effective in the field under tropical conditions against local populations of wild flies.

It is very likely that two or more new specialized strains will be needed to function in the diverse ecological situations of southern Mexico. To adapt new cultures to laboratory rearing and to build up strains in sufficient numbers for field tests will require at least one year. Before laboratory rearing can begin, a laboratory needs to be built according to the specifications of the attached sketch.

Development of new breeding stocks in the as yet unstudied environments of southern Mexico will require a minimum of two bi-lingual entomologists-ecologists. The new field collections will need to be adapted to laboratory rearing and tested for vigor and mating competitiveness in the laboratory. One entomologist-physiologist will be required to field-test new strains in the southern Mexico release areas.

This research must be done on-site in southern Mexico as large-scale pilot tests in a tropical environment. For APHIS to go into a mass-production effort without one year of prior research by ARS would risk the waste of millions of dollars of program funds while discovering differences between various strain responses in new ecological situations in southern Mexico.

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3. Attractants.
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5. Endocrine systems and their role in colonization and mass release.
6. Use of electrophoretic methods to identify strains and recognize genetic shift.

Rec'd via Teletype
1-21-74. 8:30 am
From HCCaf J.E.

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As a minimum, ARS should conduct a research program in Mexico that would provide additional information along the following lines:

E. A. Taylor

U.S. DEPARTMENT OF AGRICULTURE

DATE

REFERENCE SLIP

2-13-74

TO

E. L. Corley, Jr., Director
Program Analysis & Coordination Staff
ARS, USDA

- | | |
|--|---|
| ☐ ACTION | ☐ NOTE AND RETURN |
| ☐ APPROVAL | ☐ PER PHONE CALL |
| ☐ AS REQUESTED | ☐ RECOMMENDATION |
| ☐ FOR COMMENT | ☐ REPLY FOR SIGNATURE OF |
| ☐ FOR INFORMATION | ☐ RETURNED |
| ☐ INITIALS | ☐ SEE ME |
| ☐ NOTE AND FILE | ☐ YOUR SIGNATURE |

REMARKS

The enclosed is forwarded to
you for action in accordance with
Mr. Edminster's memorandum of
April 9 on "Interim Policy and Pro-
cedures for Dropping, Combining,
or Adding Work Reporting Units at
Locations."

FROM

Carroll L. Hoffpauir

REFERENCE SLIP 3-13-71

W. J. Lister, Jr., Director

Director, Federal Bureau of Investigation

482, W. 4

☐ ACTION ☐ FOR AND FROM

☐ APPROVE ☐ RE WONT CALL

☐ A. APPROVED ☐ RECOMMENDATION

☐ FOR COMMENT ☐ FOR YOUR INFORMATION

☐ FOR INFORMATION ☐ RETURNED

☐ RETURN ☐ SEE ME

☐ NOT AND TO ☐ NOT REPORT

The enclosed is forwarded to

you for action in accordance with

Mr. Lister's recommendation of

that a "Federal Policy and Pro-

cedure for Reporting Conditions

on Aging and Reporting Cases of

Depression."

Control L. Lister

copy to G. Morgan

REQUEST FOR APPROVAL OF A SIGNIFICANT SHIFT

1. Initiator of Request:

H C Cox
Associate Deputy Administrator
Southern Region

2. Description of Shift:

The proposed shift involves the transfer of Dr. J. W. Snow and his salary from Tobacco Insect Control work on St. Croix, Virgin Islands to Screwworm Biology and Control work at Mission, Texas. This transfer is desired as soon as possible after March 3, 1974.

3. Justification:

With the first failure in 10 years of the Eradication Program to protect the Southwest from screwworms, research support to APHIS must be increased to insure the success of their program at Mission, Texas and the Mexican program due to start in November, 1974. Presently, ARS effort on screwworms at Mission is limited to 3.0 SMY plus some temporary assignments. The research leader at Mission, Dr. Bushland, has retired and the current acting research leader, O. H. Graham, is on temporary duty from Kerrville. The transfer of Dr. Snow would establish permanent leadership for the anticipated expanded program on screwworm biology and control while Dr. Snow's contribution to the tobacco insect control program at St. Croix has been particularly noteworthy, his scientific ability and leadership are needed even more in the screwworm program. The funds to be transferred do not include any pilot test funds.

<u>WRU</u>	<u>Short Title</u>	<u>Location</u>
7619-15450	Insect Pests of Tobacco	St. Croix, V. I.

<u>FY 1974</u>				<u>Annual Shift</u>			
<u>Planned Base</u>		<u>Change for</u>		<u>Planned Base</u>		<u>Change on</u>	
<u>\$</u>	<u>SMY</u>	<u>Remainder of FY 74</u>		<u>\$</u>	<u>SMY</u>	<u>Annual Basis</u>	
		<u>\$ 1/</u>	<u>SMY</u>			<u>\$</u>	<u>SMY</u>
130,400	2.0	-8,300	-0.3	104,900	1.0	-25,500 ^{1/}	-1.0

RECEIVED

FEB 15 1974

AREA OFFICE
WESLACO, TEXAS

2.

<u>WRU</u>		<u>Short Title</u>		<u>Location</u>			
7204-11990		Screwworm on Livestock		Mission, Texas			
<u>FY 1974</u>				<u>Annual Shift</u>			
		<u>Change for</u>				<u>Change on</u>	
<u>Planned Base</u>		<u>Remainder of FY 74</u>		<u>Planned Base</u>		<u>Annual Basis</u>	
<u>\$</u>	<u>SMY</u>	<u>\$</u>	<u>SMY</u>	<u>\$</u>	<u>SMY</u>	<u>\$</u>	<u>SMY</u>
247,000	3.0	+8,300	+0.3	272,500	4.0	+25,500	+1.0

1/ This does not include any pilot test funds.

4. Action:

	<u>Signature</u>	<u>Date</u>
Recommended:	<u>O. P. Hoffman, actg</u> , DA	<u>2/13/74</u>
Concurred:	_____, PACS	_____
" :	_____, NPS	_____
Approved:	_____, OA	_____

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE

SOUTHERN REGION
Screwworm Research Laboratory
P. O. Box 986 Moore Air Base
Mission, Texas 78572

October 2, 1974

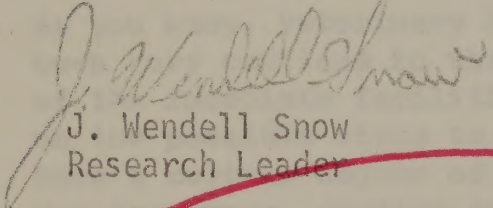
Subject: Proposed Fly Cage

To: S. C. Gartman

Thank-you for your memo dated September 19 regarding a large field cage at Weslaco, Texas. I anticipate no trouble in providing proper protocol for operation or in the time schedule. We share your concern for accidental release and insist upon the development of procedures to insure no release of viable screwworms.

I believe the cage is necessary to provide adequate answers on competitiveness, assortive mating, and most important, strain development. I do not know who currently has the proposal, but hopefully you will receive it officially in the near future.

Thank-you and Veterinary Services for the proposal evaluation.


J. Wendell Snow
Research Leader

cc: E.A. Taylor, Weslaco, TX
H C Cox, New Orleans, LA
L. Henderson, Beltsville, MD

RECEIVED

OCT 3 1974

AREA OFFICE
WESLACO, TEXAS

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
FEDERAL CENTER BUILDING
HYATTSVILLE, MARYLAND 20782

Subject: Proposed Fly Cage

September 19, 1974

To: J. Wendell Snow
Research Leader
Mission, Texas

Reference is made to our numerous conversations about your proposed field study cage to be located at Weslaco, and to copies we received of the proposal which you submitted to Entomology Research. Reference is also made to our letter to Mr. Husman dated June 4, 1974, which transmitted the proposal for this study. It is our understanding that Mr. Husman has met with you and outlined certain changes in the cage which would make it acceptable for housing of fertile screwworm flies. The official proposal through Entomology Research has not reached the screwworm staff; however, we have discussed it and feel sure that we can agree to its use provided proper protocol for operations is adopted and followed carefully.

As you know, Veterinary Services and Entomology Research as well have been very cautious in the past about the conduct of research outside of the immediate facilities at Mission. This cautiousness is based on the possible risks to the livestock industry. This cage would have a certain degree of risk attached to its operation. Also, as you are aware, anytime screwworms appear anywhere near the area, industry people immediately want to assume that fertile flies have escaped rather than accept the fact that native screwworms are migrating in the area. You are always on the defensive to prove that no flies are escaping your facilities.

In staff discussions, one question which arises is at what point in the eradication program would it be considered unsafe to continue the use of fertile screwworm flies in this cage facility. At the present time, our thinking is that at such time that native screwworms are not known to exist in or near the five northern States of Mexico then serious consideration could be given towards discontinuing use of such a facility. At that same time, discussions will probably be under way relative to a projected timetable for phasing out of the Mission production facilities. A rough guess at this time would be that this will be somewhere between four and six years from now.

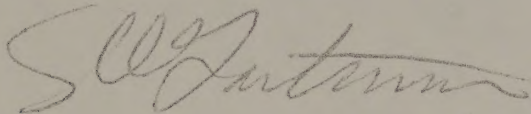
BAK 225 S2 VT 10 11

J. Wendell Snow

2

It is our understanding that the plans for your cage would be such that it could be used for insects other than screwworms and, therefore, would continue to have value to Entomology Research.

When we receive the formal proposal through channels, we will reply accordingly.

A handwritten signature in cursive script, appearing to read "S. C. Gartman".

S. C. Gartman
Chief Staff Veterinarian
Screwworm Eradication

614 235 32 VII 10 11

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
SOUTHERN REGION
Screwworm Research Laboratory
P. O. Box 986
Mission, Texas 78572

September 3, 1975

Subject: Cage Proposal

To: W. F. Schwiesow
Asst. to Area Director
Subtropical Texas Area
Weslaco, Texas 78596

I have attempted to answer each of the 18 questions. Please keep in mind that most of them involve security or location and must be discussed with APHIS or Texas A&M before concrete decisions can be made.

The answers are as follows:

1. Is a fence required for permanent defense?

Yes, a fence is necessary to prevent vandalism as well as protection from machinery damage, etc. The fence must be seven to eight feet high with barbed wire.

2. Is the cage to be double screened?

Yes, APHIS will require the extra screen to protect against accidental tears, etc.

3. What type screen or wire?

The mesh should be as large as possible because of heat build-up within the cage but must prevent the escape of flies. A mesh size of about 16 x 16 will probably be sufficient. The outside and inside gauge do not have to be the same.

4. What size livestock will be tested?

Sheep and goats will be the principal animals used, but cattle up to 500 lbs. may be utilized. The animals do not need access to all the caged area so smaller holding fences can be constructed within each section. This will keep stock away from the screened sides.

5. How are animals to come in?

A fly lock must be constructed that by-passes the laboratory facilities. The lock must be about 10 feet by 10 feet. Visual inspection of the fly lock will be required to pass animals in and out.

6. Are animal shelters needed in the cage?

No. As we visualize its operation, animal shelters will not be required. In cases where they are needed, temporary arrangements can be made. In addition, no permanent arrangements are needed within the caged area for storage of feed.

7. What provisions are needed for watering?

Water for the animals will be needed in each of the four sections. A faucet is sufficient at these four locations.

8. Why must the cage be sixteen feet high?

The higher the better based on observations of screwworm behavior but a 12-foot height will be adequate, particularly if monetary savings result.

9. Does the cage need to be this large?

Yes; 200 x 200 permits large area testing and approximates the area we believe necessary for monitoring behavior. In preliminary testing, this size also permits temporary subdivisions (50 x 50) for repetition purposes.

10. A masonry wall will be needed for security. Should a drainage system be provided? What type of protection is necessary to prevent escape?

Yes, a drainage system will be necessary. The system will require removable screens to prevent larval escape. Screening drains is a standard procedure in our factory operation and presents no special problem.

11. What is the height, elevation, drainage, etc., condition of the proposed building site?

The exact site has not been finalized, but it is on property owned by Texas A&M University. Several locations are available, and all are level and present no drainage or height problems.

12. What type construction for the head house?

Cinder blocks will be adequate from a research standpoint. Some flexibility exists here depending on cost and availability of material.

13. Is the head house to be airconditioned?

Yes.

14. What are the plumbing and electrical needs for the laboratory?

The plumbing needs are for the shower, toilet, and one sink in the laboratory. In terms of electrical needs, we need adequate power for heating, cooling, two refrigerators, one freezer, research instruments, and a few shop tools. In addition, we would like two outlets on each of the available laboratory and shop walls.

15. Is water available at the site?

Water is within 200 yards of the site.

16. Is the site near a suitable septic tank?

No. A septic line and bleeder field will be required.

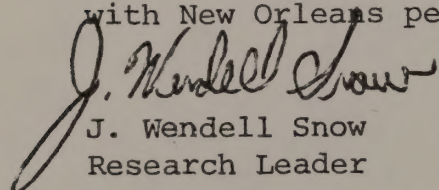
17. Is natural gas available?

No.

18. Is adequate power available? If so, what kind?

The cage is to be put away from existing structures, and as a result, no power will be within a quarter of a mile. However, adequate power of all types is available within that distance.

Some of these questions are particularly difficult, and I'm sure more clarification will be needed. If it is useful, I'll be happy to visit with New Orleans personnel.



J. Wendell Snow
Research Leader

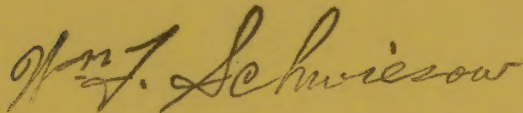
SUBTROPICAL TEXAS AREA
P. O. Box 267
Weslaco, Texas 78596

September 8, 1975

Subject: Screwworm Cage Proposal
To: Leonard Short, Architect
New Orleans, LA

Enclosed is a copy of J. W. Snow's response to questions raised concerning construction of this research facility at Weslaco.

If further clarification is needed, please feel free to contact Dr. Snow directly.



Wm. F. Schwiesow
Asst. to Area Director

Enclosure

ARS:SR:WFSchwiesow:nc 9/8/75

STATIONERY DEPT. AREA
P.O. BOX 201
WASACCO, TEXAS 75204

September 8, 1975

Subject: Sewerage Dept. Proposal

For: Leonard Short, Architect
New Orleans, LA

Enclosed as a copy of J. W. Snow's response to questions
raised concerning construction of this research facility
at Wasacoco.

If further clarification is needed, please feel free to
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W. J. Snow

W. J. Snow
Asst. to Area Director

Enclosure

W. J. Snow
W. J. Snow: 9/18/75

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
SOUTHERN REGION

Screwworm Research Laboratory
P. O. Box 986
Mission, Texas 78572

September 3, 1975

Subject: Cage Proposal

To: W. F. Schwiesow
Asst. to Area Director
Subtropical Texas Area
Weslaco, Texas 78596

RECEIVED

SEP 4 1975

AREA OFFICE
WESLACO, TEXAS

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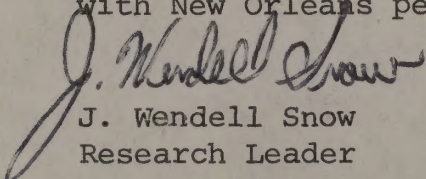
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J. Wendell Snow
Research Leader

